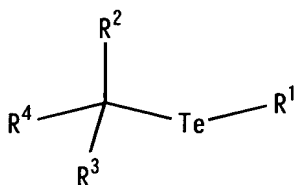


## CLAIMS

1. An organotellurium compound represented by the formula

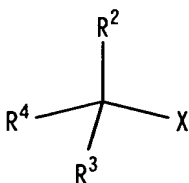
(1)



(1)

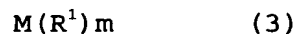
wherein  $\text{R}^1$  is  $\text{C}_1\text{-C}_8$  alkyl,  $\text{R}^2$  and  $\text{R}^3$  are each a hydrogen atom or  $\text{C}_1\text{-C}_8$  alkyl, and  $\text{R}^4$  is aryl, substituted aryl, aromatic heterocyclic group, hydroxycarbonyl or cyano.

2. A process for preparing an organotellurium compound of the formula (1) comprising reacting a compound of the formula (2), a compound of the formula (3) and metallic tellurium



(2)

wherein  $\text{R}^2$ ,  $\text{R}^3$  and  $\text{R}^4$  are as defined above, and X is a halogen atom

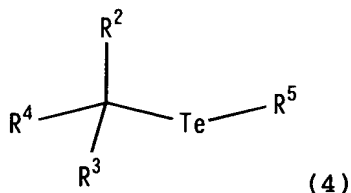


wherein  $\text{R}^1$  is as defined above, M is an alkali metal, alkaline earth metal or copper atom, and m is 1 when M is an alkali metal, m is 2 when M is an alkaline earth metal, or m is 1 or 2 when M is a copper atom.

3. An organotellurium compound of the formula (1) which is obtainable by reacting a compound of the formula (2), a compound of the formula (3) and metallic tellurium.

4. A living radical polymerization initiator of the formula

(4)



wherein  $R^5$  is  $C_1$ - $C_8$  alkyl, aryl, substituted aryl or aromatic heterocyclic group,  $R^2$  and  $R^3$  are each a hydrogen atom or  $C_1$ - $C_8$  alkyl, and  $R^4$  is aryl, substituted aryl, aromatic heterocyclic group, hydroxycarbonyl or cyano.

5 A process for producing a living radical polymer characterized by polymerizing a vinyl monomer with use of a compound of the formula (4) as a living radical polymerization  
10 initiator.

6. A living radical polymer which is obtainable by subjecting a vinyl monomer to living radical polymerization with use of a living radical polymerization initiator of the formula (4).

15 7. A macro living radical polymerization initiator comprising the living radical polymer of claim 6.

8. A process for producing a block copolymer comprising polymerizing a vinyl monomer using the macro living radical polymerization initiator of claim 7 as a living radical  
20 polymerization initiator.

9. A block copolymer which is obtainable by polymerizing a vinyl monomer using the macro living radical polymerization initiator of claim 7 as a living radical polymerization initiator.